

inApril's OBN Electronics



-10 to +55 °C

0.25, 0.5, 1, 2 ms and 4 ms

0 to 36 dB in steps of 6 dB

206.5 Hz (82.6 % of Nyquist) @ 2ms **

Programmable 0.1 – 10 Hz, or disabled

DC - 0.413 x f_{DATA}

Sinc+FIR, Linear phase

4 24 or 32 bit

0.5 %



iA200 Controller & Date Logger

Range	0 - 360 °
Relative uncertainty	± 5 ° (< ±55 ° from Equator)
Data capture memory	
	Embedded managed NAND flash
Storage capacity total	128 GByte
Self-test, diagnostic, and calibra	ation
Impedance test	Yes
Geophone impulse test	Yes
Internal noise (preamp input terminated)	Yes
Internal gain accuracy	Yes
Internal total harmonic distortion (THD)	Yes
Channel separation (Crossfeed)	Yes
Common-mode rejection ratio (CMRR)	Yes
Automatic gain and offset calibration	Yes
Clock stability	Yes
Transponder (Optional)	
Type (integrated design)	Interface available (Sonardyne 26kHz)
Communication link; data captu	re and diagnostic
Ethernet over copper	100 base-TX
Mechanical specification	000 (1) 05 (1) 04 (1) (000.0)
Dimensions	220mm(L) x 65mm(w) x 21mm(hw/CSAC)
	Other shapes available on request
Notes	
* @ 2ms sampling interval, 25°C, 31.25 Hz, internal test, unless otherwise noted	
** Recording bandwidth = 0.413 x fDATA	
f _{DATA} = sampling frequency =1/Sample	Interval (Hz)
*** for geophone channel, and hydropho	ne channel above 10 Hz

**** 1.2 $\mu Vrms$ @ 0 dB for frequency above low cu

High pass filter roll off	6 dB/octave
Maximum input signal	± 2500 mV @ 0 dB
	± 625 mV @ 12 dB
	± 156 mV @ 24 dB
	± 39 mV @ 36 dB
Equivalent Input Noise ***	0.95 μVrms @ 0 dB ****
	0.31 μVrms @ 12 dB
	0.21 μVrms @ 24 dB
	0.20 μVrms @ 36 dB
Dynamic Range @ 0dB gain	125 dB Geophone, 120 dB Hydrophone
Total harmonic distortion (THD)	< -120 dB Geophone @ 0 dB gain
	< -120 dB Hydrophone @ 0 dB gain

Common mode rejection ratio (CMRR)

Crossfeed

General

Operating Number of channels

ADC resolution

Sample interval

Anti-aliasing filter

High pass filter

Operating temperature range

Pre-amplifier gain, adjustable

Gain Relative uncertainty

Recording bandwidth (-3dB)

Data acquisition *

Tilt Sensor	
Туре	3-axis MEMS inclinometer
Range X and Y (Roll and Pitch)	± 90 °
Relative uncertainty	±1°

<-120 dB > 90 dB





iA100 Power Supply and Charger

Internal Power supply and Charger

Dimensions	182 mm(L) x 61 mm(w) x 12 mm
	Other shapes available on request
Operating temperature range	-10 to +55 °C
Charger operating voltage range	36 - 72 VDC
Charger insulation voltage, input/output	1500 VDC
Recharge time to 80% SOC	16 h
Charging temperature range	+4°C - +40°C

Battery and Battery Management System

Operating temperature range	-10 to +55 °C
Chemistry	Li-Ion
BMS	Fuel gauging, diagnostic and protection
Certification	UN38.3

iA300 Battery Management (in battery packs)